

## ABSTRACT

650 The present invention relates to a polymerizable macromers for applications in medicine and biotechnology and synthesis thereof. Macromers comprises polyvalent various carbohydrates including *N*-Acetyl Glucosamine(NAG) which bind more efficiently to lysozyme than NAG itself. Effective inhibition of lysozyme is possible even at very low ligand concentrations. The 655 polymerizable macromer could be used for prevention and treatment of bacterial and viral infections. Moreover these macromers can be copolymerized with other comonomers to form stimuli sensitive polymers and used for the recovery of biomolecules. The methodology can be extended to other ligands such as sialic acid and used for preventing 660 influenza and / or rotavirus infections.

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